3. Emmanuel

Program Name: Emmanuel.java **Input File: emmanuel.dat**

Emmanuel is in the same statistics course as Brianna, and upon hearing she wrote a program to calculate the range of a set of data, he wanted to write a program to calculate the mode of a set of data. The mode of a set of data is defined as the value that appears the most often. Can you help Emmanuel write a program to calculate the mode as well as the number of occurrences of the mode?

Input: Input starts with a line containing an integer N (1<=N<=10), the number of test cases. The following N lines will contain a set of positive integers between 1 and 100 (inclusive) inside of curly braces. Data is comma separated with no spaces. The set is allowed to have duplicates and will have at least one element and no more than 100 elements. The set of data is guaranteed to have only one mode. In the below sample input, the 5th sample is a single line of text in the data file.

Output: For each test case, output the mode for the set of data as well as the number of occurrences of that mode formatted as shown below.

Sample Input:

```
5
{6,2,8,4,5,4,3,5,7,11,12,100,3,4,5,3,4,66}
{2,2}
{23,15,3,4,15,2}
{4}
{96,40,42,30,47,7,61,88,36,87,94,60,33,84,62,83,27,80,51,95,63,4
9,66,24,97,93,38,15,81,64,44,75,76,31,79,54,41,32,70,57,20,11,73
,72,50,39,86,5,34,99,37,13,23,55,35,45,43,77,65,12,82,3,28,46,53
,6,17,29,9,25,69,67,26,78,48,19,89,14,10,4,91,85,8,56,21,99,16,7
1,18,90,22,52,68,92,58,59}
```

Sample Output:

```
4 appeared 4 time(s)
2 appeared 2 time(s)
15 appeared 2 time(s)
4 appeared 1 time(s)
99 appeared 2 time(s)
```